

Claim ~~38~~<sup>3</sup>: The isolated extrachromosomal nucleic acid molecule of claim ~~36~~<sup>1</sup>, having the nucleotide sequence set forth at SEQ ID NO: 1.

Claim ~~39~~<sup>4</sup>: The isolated extrachromosomal nucleic acid molecule of claim ~~37~~<sup>2</sup>, having the nucleotide sequence set forth at SEQ ID NO: 11.

Claim ~~40~~<sup>5</sup>: Expression vector comprising the isolated extrachromosomal nucleic acid molecule of claim ~~36~~<sup>1</sup>, operably linked to a promoter.

Claim ~~41~~<sup>6</sup>: Expression vector comprising the isolated extrachromosomal nucleic acid molecule of claim ~~37~~<sup>2</sup>, operably linked to a promoter.

Claim ~~42~~<sup>7</sup>: Prokaryotic cell or eukaryotic cell, transformed or transfected with the isolated extrachromosomal nucleic acid molecule of claim ~~36~~<sup>1</sup>.

Claim ~~43~~<sup>8</sup>: Prokaryotic cell or eukaryotic cell, transformed or transfected with the isolated extrachromosomal nucleic acid molecule of claim ~~37~~<sup>2</sup>.

Claim ~~44~~<sup>9</sup>: Prokaryotic cell or eukaryotic cell, transformed or transfected with the expression vector of claim ~~40~~<sup>5</sup>.

Claim ~~45~~<sup>10</sup>: Prokaryotic cell or eukaryotic cell, transformed or transfected with the expression vector of claim ~~41~~<sup>6</sup>.

Claim ~~46~~<sup>11</sup>: The prokaryotic cell of claim ~~42~~<sup>7</sup>, wherein said cell is E. coli.

Claim ~~47~~<sup>12</sup>: The prokaryotic cell of claim ~~43~~<sup>8</sup>, wherein said cell is E. coli.

Claim ~~48~~<sup>13</sup>: The eukaryotic cell of claim ~~42~~<sup>7</sup>, wherein said cell is S. cerevisiae, PAE, COS or CHO.

Claim ~~49~~<sup>14</sup>: The eukaryotic cell of claim ~~43~~<sup>8</sup>, wherein said cell is S. cerevisiae, PAE, COS or CHO.

Claim ~~50~~<sup>15</sup>: The prokaryotic cell of claim ~~44~~<sup>9</sup>, wherein said cell is E. coli.

Claim ~~51~~<sup>16</sup>: The prokaryotic cell of claim ~~45~~<sup>10</sup>, wherein said cell is E. coli.

Claim ~~52~~<sup>17</sup>: The eukaryotic cell of claim ~~44~~<sup>9</sup>, wherein said cell is S. cerevisiae, PAE, COS or CHO.

Claim ~~53~~<sup>18</sup>: The eukaryotic cell of claim ~~45~~<sup>10</sup>, wherein said cell is S. cerevisiae, PAE, COS or CHO.

Claim ~~56~~<sup>21</sup>: The isolated ALK-1 protein, having the amino acid sequence set forth in SEQ ID NO:

2.

Claim ~~57~~<sup>22</sup>: The isolated ALK-1 protein having the amino acid sequence set forth in SEQ ID NO:

12.

Claim ~~58~~<sup>23</sup>: A method for determining if a substance is a ligand acid for an ALK-1 protein having the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 12, comprising contacting said substance with a cell which presents said ALK-1 protein on its surface, and detecting specific binding of said substance to said ALK-1 protein on the surface, wherein a substance that specifically binds to said ALK-1 protein is an ALK-1 ligand.

Claim ~~59~~<sup>24</sup>: The method of claim ~~58~~<sup>23</sup> wherein said cell has been transformed or transfected with an isolated nucleic acid molecule which encodes said ALK-1 protein.